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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Gad Talmon

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EXAMINER

TORRENTE, RICHARD T

ART UNIT

PAPER NUMBER

2482

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/501,949	Applicant(s) TALMON ET AL.	
	Examiner RICHARD TORRENTE	Art Unit 2482	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 August 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-6,8-11,13-24,26,27,30-47,49-55 and 57-65 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-6,8-11,13-24,26,27,30-47,49-55 and 57-65 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/20/10 has been entered.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO interim guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See Lowry, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

Claims that recite nothing but the physical characteristics of a form of energy, such as a frequency, voltage, or the strength of a magnetic field, define energy or magnetism, per se, and as such are nonstatutory natural phenomena. O'Reilly, 56 U.S. (15 How.) at 112-14. Moreover, it does not appear that a claim reciting a signal encoded with functional descriptive material falls within any of the categories of patentable subject matter set forth in Sec. 101.

... a signal does not fall within one of the four statutory classes of Sec. 101.

... signal claims are ineligible for patent protection because they do not fall within any of the four statutory classes of Sec. 101.

Claim(s) 63 is/are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 63 is drawn to functional descriptive material recorded on a machine readable medium. Normally, the claim would be statutory. However, the specification discloses subject matter that encompasses non-statutory subject matter.

Because the full scope of the claim as properly read in light of the disclosure encompasses non-statutory subject matter, the claim as a whole is non-statutory. The examiner suggests amending the claim to *include* the language “**non-transitory**” before the phrase “**computer readable medium**” to include the disclosed tangible computer readable media, while at the same time *excluding* the intangible media such as signals, carrier waves, etc. Any amendment to the claim should be commensurate with its corresponding disclosure.

3. The USPTO interim guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

Descriptive material can be characterized as either “functional descriptive material” or “nonfunctional descriptive material”. In this context, “functional descriptive material” consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of “data structure” is “a physical or logical relationship among data elements, designed to support specific data manipulation functions.” The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) “Nonfunctional descriptive material” includes but is not limited to music, literary works and a compilation or mere arrangement of data.

When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d

Art Unit: 2621

1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (claim to data structure stored on a computer readable medium that increases computer efficiency held statutory) and Warmerdam, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory).

In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized and is thus statutory. See Lowry, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

Claim(s) 65 is/are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claim 65 defines a program embodying functional descriptive material. However, the claim does not define a computer-readable medium or memory and is thus non-statutory for that reason (i.e., "When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory on most cases since use of technology permits the function of the descriptive material to be realized" - Guidelines Annex IV). That is, the scope of the presently claimed a program can range from paper on which the program is written, to a program simply contemplated and memorized by a person. The examiner suggests amending the claim to embody the program on "non-transitory computer-readable medium" or equivalent in order to make the claim statutory. Any amendment to the claim should be commensurate with its corresponding disclosure.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 2621

5. Claim(s) 1, 2, 4-6, 8-11, 13, 14, 17 and 30 is/are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Claim 1 recites the limitation "the feature steam" in line 22. There is insufficient antecedent basis for this limitation in the claim.

7. Claim 17 recites the limitation "the feature steam" in line 5. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1, 2, 4-6, 8-11, 13-24, 26, 27, 30-47, 49-55 and 57-65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bolle et al. (US 2002/0062482) in view of Edanami (US 6,996,275).

Regarding claim 1, Bolle discloses a method for performing event detection and object tracking in an image stream (see fig. 8), wherein an event is defined as the occurrence of a type of activity in field (motion) which requires some type of action in

Art Unit: 2621

response thereto (see displaying icons in 850 in response to motion of 820 and 830 in fig. 8; see 1101 in fig. 11), said method comprising: a) installing in the field (see 110 in fig. 3), an image acquisition device (see 340 in fig. 3) for acquiring an image stream and comprising a local programmable processor (see 350 and 360 in fig. 3) for converting the acquired image stream, consisting of one or more images, to a digital format, and a local encoder (see 350 and 360 in fig. 3), preprogrammed to operate with an image processing server (see 100 in fig. 3) via a data line on the basis of distribution of image processing algorithms between the local encoder and the server (see 316 and 330 in fig. 3), said local encoder being operable to apply low-level feature extraction (e.g. see fig. 5) to the digital format of said image stream, for selectively generating, from said image stream a feature stream (see 550 in fig. 5) including parameters related to attributes of areas in said image stream, for transmitting the feature stream via the data line to the image processing server (see 360 in fig. 3); and b) connecting said image acquisition device to the data line through a corresponding data communication channel (see connection between 100 and 110 in fig. 3), to enable the operation of the encoder (see enabling encoder with request from 310 in fig. 3) by the image processing server and transmission of the feature stream from the image acquisition device to the image processing server (e.g. see 430 to 230 in fig. 4).

Although Bolle discloses a data line for one field system (see fig. 3) and an operator actuating high-level processing at the image processing server to detect the event (see 1101 in fig. 11), it is noted that Bolle does not disclose wherein the data line

Art Unit: 2621

is a data network and wherein the high-level processing applications is performed by a server.

However, Edanami, in the same field of endeavor, discloses an image control system wherein the data line (see 100-1 - 100-n in fig. 21) is a data network (see 30 in fig. 21) and wherein the high-level processing applications is performed by a server (see 17 in fig. 21).

Given the teachings as a whole, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate Edanami teachings of server event detection into Bolle event detection for the benefit of a centralized processing of multiple video sources, and to produce a real time alarm based on an automatic detection of an event from video surveillance data.

Regarding claims 2, 16 and 47, Bolle further discloses wherein the local encoder is a composite encoder (see fig. 4), which comprises circuitry for compressing the image stream (e.g. see 430 in fig. 4), and further comprising: a) operating said composite encoder in a first mode (e.g. see 550 in fig. 5), during which it generates and transmits said feature stream to said image processing server, and b) operating said composite encoder in a second mode (e.g. see 432 in fig. 4) responsive to detecting said events, during which it transmits to said image processing server, in addition to said feature stream, at least a portion of said image stream in a desired compression level, according to commands sent from said image processing server (see 325 and 350 in fig. 3).

Regarding claims 4, 17, 33 and 49, Bolle further discloses comprising decoding one or more compressed image streams containing events by said server (see 355 in fig. 3), and transmitting the decoded image streams to the display of an operator for viewing (see 170 in fig. 3).

Regarding claims 5, 18, 39 and 54, Bolle further discloses comprising recording one or more compressed image streams obtained while said local encoder operates in said second mode (e.g. see 781 in fig. 7A).

Regarding claims 6, 19 and 55, Bolle further discloses comprising dynamically allocating additional image processing resources, in the server, to data communication channels that receive image streams (see allocating for various compression in fig. 4).

Regarding claims 8, 21, 41 and 57, Bolle further discloses comprising generating and displaying a graphical polygon that encompasses an object of interest, being within at least one of a frame of an image and an area of interest in said image (see 641 in fig. 6A).

Regarding claims 9, 22, 42 and 58, Bolle further discloses comprising generating and displaying a graphical trace indicating the history of movement of an object of

Art Unit: 2621

interest, being within at least one of the frame of an image and an area of interest in said image (see fig. 8).

Regarding claims 10, 23, 43 and 59, Bolle further discloses wherein the image stream is selected from a group of images that comprises video streams, still images, computer generated images, pre-recorded digital video data and analog video data (see fig. 7).

Regarding claims 11 and 24, Bolle further discloses wherein the image streams are video streams, compressed using MPEG format (see P [0003]).

Regarding claims 13, 26, 44 and 60, Bolle further discloses wherein the features data includes are at least one of: a motion features (see fig. 8).

Regarding claims 14, 27, 45 and 61, Bolle further discloses comprising performing, by the server, at least one of: Facial Recognition (FR) (see P [0013]), using the feature stream received from the image acquisition device, through the data communication channel.

Regarding claim 15, the claim(s) recite analogous limitations to claim 1, and is/are therefore rejected on the same premise.

Furthermore, Bolle discloses transmitting indications regarding said event to an operator (see 1101 in fig. 11; e.g. see 850 in fig. 8).

Regarding claims 20 and 40, Bolle further discloses in which said portion of said image streams obtained while operating in the second mode, comprises only a portion of the image that corresponds to a desired area of interest (see fig. 8).

Regarding claims 30, 31, 37 and 52, Bolle further discloses wherein said feature further comprises a motion feature, said motion features is encoded in said feature stream only when said motion features exceeds a predetermined threshold (see fig. 8; see ¶ [0037]).

Regarding claim 32, the claim(s) recite analogous limitations to claim 1, and is/are therefore rejected on the same premise.

Furthermore Bolle discloses feature stream having a bandwidth narrower than that of the corresponding stream (see ¶ [0044])

Regarding claim 34, Bolle, now incorporating the teaching of Edanami, further discloses wherein said high level image processing comprises: receiving said reduced bandwidth feature stream transmitted from each of said plurality of image acquisition devices (see Bolle fig. 4 via Edanami fig. 21), analyzing each said reduced bandwidth feature stream at said remote image processing server (see Edanami fig. 21), and

Art Unit: 2621

detecting events in each said image stream based upon said analyzing of each said reduced bandwidth feature stream by said remote image processing server (see Edanami 17 in fig. 21), and further comprising displaying said image stream in which an event is indicated on a display screen of an operator at said remote image processing server (see Bolle 170 in fig. 3).

Regarding claim 35, Bolle, now incorporating the teaching of Edanami, further discloses wherein said selective extraction comprises selectively encoding features in said reduced bandwidth feature stream only when at least one of a number and type (see fig. 8) of said features exceed a predetermined threshold (e.g. see Bolle ¶ [0037]), wherein said threshold is applied to said image acquisition device to control when said encoder generates and transmits said feature stream (see Bolle fig. 5), and said number and type of features exceeding said threshold are indicative of activity to be further analyzed (see Edanami 17 in fig. 21) by said remote image processing server in order to detect said event.

Regarding claims 36, 38, 46, 50, 51 and 53, the claim(s) recite analogous limitations to claim 1, and is/are therefore rejected on the same premise.

Regarding claims 62-65, the claim(s) recite analogous limitations to claim 1, and is/are therefore rejected on the same premise.

Furthermore, although Bolle discloses a threshold value for each feature (see fig. 8; see ¶ [0038]), it is noted that Bolle is silent on how the threshold are setup for the image acquisition device.

However, Edanami, in the same field of endeavor, discloses an image control system dynamically determining a threshold value (see S1 and S2 in fig. 14), and updating each of the image acquisition devices with the corresponding threshold (see network for updating in fig. 21).

Given the teachings as a whole, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate Edanami teachings of threshold update into Bolle threshold for the benefit of a centralize processing of multiple video sources, and to produce a real time alarm based on an automatic detection of an event from video surveillance data.

Response to Arguments

10. Applicant's arguments with respect to claims 1, 2, 4-6, 8-11, 13-24, 26, 27, 30-47, 49-55 and 57-65 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RICHARD TORRENTE whose telephone number is (571) 270-3702. The examiner can normally be reached on M-F: 7:30 - 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on (571) 272-7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Young Lee/
Primary Examiner, Art Unit 2482

/Richard Torrente/
Examiner, Art Unit 2482